



**Chapter 24, Inc.
Madison, Wisconsin**

Society of Broadcast Engineers

April 2000

TELECOM INDUSTRY NEWS

By Neal McLain

608-2XX IS FILLING UP

Like every other area code in North America, our own area code 608, here in southwest Wisconsin, is filling up. But the situation isn't nearly as critical here as it is in many other parts of the country. Indeed, 608 is still a long way from "jeopardy," the point at which some sort of relief — either a split or an overlay — is necessary. Currently, there are about 396 central office (NXX) codes in use, out of a theoretical total of 792.

But the 608-2XX block, used mostly by Ameritech's five exchanges in the Madison area, is filling up a lot faster. Right now, 89 central office codes, out of a possible 99, have been assigned.

So it looks like we'll run out of 2XX codes in Madison long before the rest of 608 exhausts.

Figure 1 lists all 608-2XX assignments as of mid-March, courtesy of NANPA, the North American Numbering Plan Administration. Here, more or less in numerical order, is a closer look at specific number blocks.

20X, 21X

These two blocks are recent assignments as central office codes. Before the area-code format change in 1995, these blocks were reserved for area codes and could not be used as central office codes anywhere in Wisconsin.

The reason for this fact stems from the dialing plan. Before 1995, calls within Wisconsin were dialed as follows:

- Local calls: NNX-XXXX.
- Home area code toll: 1-NNX-XXXX.

(continued on page 4)

Next Meeting:

**Wednesday,
April 26, 2000**

**Elections and
Dane County EAS
Plan**

**Dutch Treat Dinner
at 5:30 PM**

**Meeting and
Program at 7:00 PM**

**at J.T. Whitney's
674 S. Whitney Way**

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FCC LOBBIES FOR LPFM

By Tom Smith

With many in Congress trying to overturn the FCC's creation on the Low-power FM service, the Commission has started a full press publicity campaign. They also issued the order that they have planned for processing the first applications.

The FCC has issued a fact sheet rebutting various claims against LPFM and also issued a statement on LPFM from Dale Hatfield, Chief of the Office of Engineering and Technology and Roy Steward, Chief of the Mass Media Bureau supporting the LPFM

discussion. In both releases the FCC took the National Association of Broadcasters to task for a CD that they issued that claimed to demonstrate interference as misleading to members of Congress and the Public.

Chairman William Kennard and Commissioner Gloria Tristani both issued statements on the opposition to LPFM on March 27th, following a lottery that selected the order of states that applications can be filed from. Both Commissioners drew parallels to LPTV in which they said the same objections were raised concerning interference that in the end did not

occur. Both also pointed out that the objections were from powerful interests in the broadcast industry against smaller voices. They also stated their belief that the interference issues were dealt with in the rulemaking.

On March 29th, Chairman Kennard issued another statement in reaction to action that the House Commerce Committee took concerning LPFM. In this statement, Kennard claimed that the only interference to LPFM was coming from high priced Washington lobbyist. The FCC also issued press

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March Business Meeting Minutes

Chapter 24 of the Society of Broadcast Engineers met on Tuesday March 21, 2000 at Babe's Bar and Grill in Madison, Wisconsin. There were 19 members, and 1 guest present.

The meeting was called to order by Chair Kevin Ruppert at 6:50 PM. Minutes of the February meeting, as published in the March newsletter, were approved as published.

Treasurer, Stan Scharch, reported a balanced checking account "in the black."

Fred Sperry reported that we have 23 Sustaining Members, with recent renewals: WMTV; Teleport Minnesota; and Maney Logic.

Program Coordinator, Denise Maney, announced that the April meeting would combine our annual election and the NAB Convention review.

National Liaison, Leonard Charles, reported that the NAB will honor SBE membership for "NAB Member Rates" for the big show in Las Vegas. There will be a large number of SBE events at the convention. Additionally the annual SBE Leadership Seminars will be back again later this year, but will be divided into two separate sessions.

Under new business:

Nominations are now officially open for officers and the Ballot will be included in April newsletter. The Nominating Committee will be the same as last year (Denise Maney, Steve Paugh, Mark Croom, and Keri Maki).

PBS is doing a series of DTV seminars. They may be able to hold one in Madison if Chapter 24 hosts. We would provide venue, meals, etc. Decision about what Chapter 24 will do about this opportunity TBA.

Kevin adjourned the business meeting at 7:20 PM.

Submitted by Lloyd Berg, Secretary, Assisted by Neal McLain

FCC ENDS ANOTHER BROADCAST AUCTION

By Tom Smith

On March 24th, the FCC conducted an auction for 2 TV construction permits that collected \$1,210,000. They were for a license in Bakersfield, CA which got a winning bid of \$894,000 and a license in El Dorado, AK which went for \$316,000. These were two licenses still left from the freeze on applications that was subject to a Federal Court decision.

From FCC Release (www.fcc.gov)

LOW-POWER FM (continued from page 1)

releases aimed at each of the states that are in the first filing window. This is no doubt to gain public support for LPFM by saying this could come to your town next. The FCC issued a seven page booklet on applying for a LPFM station which could be considered another element in the publicity drive.

The order of states that applications will be accepted from, and the dates are as follows:

First Group: Alaska, California, District of Columbia, Georgia, Indiana, Louisiana, Maine, Mariana Islands, Maryland, Oklahoma, Rhode Island, Utah (Public Notice Late April 2000; filing window Late: May 2000).

Second Group: Connecticut, Illinois, Kansas, Michigan, Minnesota, Mississippi, Nevada, New Hampshire, Puerto Rico, Virginia, Wyoming. (Public Notice July 2000; filing window: August 2000).

Third Group: American Samoa, Colorado, Delaware, Hawaii, Idaho, Missouri, New York, Ohio, South Carolina, South Dakota, Wisconsin (Public Notice October 2000; filing window: November 2000).

Fourth Group: Arizona, Florida, Iowa, New Jersey, North Dakota, Oregon, Tennessee, Texas, U.S. Virgin Islands, Vermont, West Virginia (Public Notice January 2001; filing window: February 2001).

Fifth Group: Alabama, Arkansas, Guam, Kentucky, Massachusetts, Montana, Nebraska, New Mexico, North Carolina, Pennsylvania, Washington (Public Notice April 2001; filing window: May 2001).

The filing windows will be last for 5 days.

From FCC press releases (www.fcc.gov)



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AMATEUR RADIO NEWS

By Tom Weeden, WJ9H

- Amateur radio storm spotters were out all over Wisconsin March 8th, when the earliest tornado on record hit Milwaukee County near Mitchell International Airport. Several minor injuries were reported, some vehicles were overturned, buildings lost roofs, power poles and trees were downed, and some gas leaks were reported. Wisconsin Section Emergency Coordinator Stan Kaplan, WB9RQR, reports that hams regularly fed the National Weather Service at Sullivan with hail and wind reports. It's believed that amateur radio storm spotters were the first to report the touchdown to the NWS.

- The man credited with being the father of SKYWARN—Sherman Carr, W9NGT, of Hartford, Wisconsin, died March 15. Begun more than 30 years ago, SKYWARN is a cooperative effort through which real-time weather information is relayed via amateur radio to NWS offices during severe weather conditions.

Carr was Wisconsin Section Emergency Coordinator in the late 1960s when he established the first Amateur Radio weather-spotting network, the Weather Amateur Radio Network ("WARN") with assistance from Dave Theophilus, W9KWQ, a NWS meteorologist in Milwaukee. In those largely pre-repeater days, the network operated on 75 meters. Carr's idea worked so well that other states adopted its basic structure, which eventually was implemented as SKYWARN. Carr was 83.

- The FCC has rescinded a March 16th Public Notice that announced implementation of the FCC's agency-wide Commission Registration System (CORES) and the issuance of an FCC Registration Number (FRN) to each licensee. The new system, which would supplant Universal Licensing System registration for Wireless Telecommunications Bureau-administered licensees, was to have gone into effect March 27th. Some key FCC personnel said they were unaware of the new system until they saw the Public Notice on the FCC's Web site. Late in March, the FCC said it was delaying implementation of CORES and FRNs and suspending the March 27th effective date "until further notice." The FCC said it plans to soon issue a new Public Notice "clarifying certain issues about the new program and providing a new effective date for implementation." CORES registration is expected to replace ULS registration within a year and possibly as early as six months from now.

(Excerpts from the American Radio Relay League's "The ARRL Letter")

Thanks to WISC-TV for maintaining the web server for the Chapter 24 Web page!

Thanks to WKOW-TV for providing copying and folding facilities for the Chapter 24 newsletter!



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TELECOM INDUSTRY NEWS (continued)

- Foreign area code toll: 1-NPA-NNX-XXXX.

where:

- NPA was (and still is) the “numbering plan area” — that’s the official name for an area code. The middle digit of the NPA was restricted to 0 or 1.

- NNX was the central office code. N could be anything from 2 to 9; X could be anything from 0 to 9. Note that the middle digit could never be 0 or 1; this fact allowed the switching equipment to distinguish between NNX codes and area codes.

On January 1, 1995, the area code format was changed to allow any numeral 0 to 8 as the middle digit. At the same time, the dialing plan was changed to:

- Local calls: NXX-XXXX.
- Home area code toll: 1-NPA-NXX-XXXX.
- Foreign area code toll: 1-NPA-NNX-XXXX.

Note two significant changes in the dialing plan:

- The central office code can now use 0 or 1 as the middle digit. In other words, NNX codes have become NXX codes.

- It’s now necessary to dial the area code for **all** toll calls because the switching equipment can’t distinguish between area codes and NXX codes.

As a result of these changes, the following 2XX codes can be assigned in 608: 200-209, 210, and 212-219, or a total of 19 combinations. Of these, all but seven have already been assigned.

And yes, 608-200 is a valid combination that can be assigned to any company that wants it. As it happens, no company has yet requested it. Among telephone companies, there seems to be a bias against N00 telephone numbers, probably because of the difficulty of pronouncing it verbally. How would you say 200-0001? Two hundred oh oh oh one? Two oh oh oh oh one? Two zero zero zero zero one? Two million one?

And what about 608-211? That combination doesn’t exist because no telephone number can begin with any X11 combination anywhere in North America. These combinations are reserved for special purposes like 411 (directory assistance) and 911 (emergency). Although 211 doesn’t have a specific nationwide assignment, it’s used in many parts of the country for services for disabled citizens.

22X

Ameritech’s Pflaum Road exchange serves southeast Madison, and suburban townships as far out as Cottage Grove and McFarland. Pflaum uses five 22X codes, and the rest are assigned to other companies. The entire 220-229 block is now completely assigned.

Back in the 50s, when Ameritech was called Wisconsin Telephone, Madison had 5-digit telephone numbers, and Pflaum numbers were in the form 2-XXXX. When WisTel introduced 7-digit numbers, 2-XXXX numbers became 222-XXXX. As more numbers were needed, 221 was added, followed by 223, 224, and 226.

But future Pflaum numbers won’t be 22X: they’re all gone now.

23X

Ameritech’s Sylvan Avenue exchange serves northwest Madison and parts of Middleton. Sylvan uses five 23X codes, and the rest are assigned to other companies. The entire 230-239 block is now completely assigned.

Back in the 5-digit days, Sylvan numbers were in the form 3-XXXX and 8-XXXX. When 7-digit numbers were introduced, these blocks became 233-XXXX and 238-XXXX. As more numbers were needed, 231, 232, and 236 were added.

Sylvan has run out of 23X numbers, and is now using 218. That’s the first, and so far only, N1X code used by Ameritech for landline service in the Madison area.


24X

Ameritech’s Kedzie Street exchange serves northeast Madison and suburban townships as far out as Sun Prairie. Kedzie uses eight 24X codes, and the other two are assigned to other companies. The entire 240-249 block is now completely assigned.

In the 5-digit days, Kedzie numbers were in the form 4-XXXX and 9-XXXX. When 7-digit numbers were introduced, these blocks became 244-XXXX and 249-XXXX. Note that a pattern is emerging here: when 5-digit numbers were expanded to seven digits, the first digit was always 2, and the second and third digits were repeats of the first digit of the old 5-digit numbers.

Note that 248 isn’t a Madison number. It’s assigned to the Cochrane Cooperative Telephone Company, the local exchange carrier serving the

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TELECOM INDUSTRY NEWS (continued)

NPA-NXX	ASSIGNEE	CITY	EXCHANGE	NPA-NXX	ASSIGNEE	CITY	EXCHANGE
608-200	..... Unassigned			608-250	..... Ameritech landline	Madison	..... Main
608-201	..... Ameritech Cellular	Janesville		608-251	..... Ameritech landline	Madison	..... Main
608-202	..... Ameritech Cellular	Janesville		608-252	..... Ameritech landline	Madison	..... Main
608-203	..... Unassigned			608-253	..... GTE of Wisconsin	W. Dells	
608-204	..... Unassigned			608-254	..... GTE of Wisconsin	W. Dells	
608-205	..... Unassigned			608-255	..... Ameritech landline	Madison	..... Main
608-206	..... U. S. Cellular (TDS)	Madison		608-256	..... Ameritech landline	Madison	..... Main
608-207	..... Nextel	Beloit		608-257	..... Ameritech landline	Madison	..... Main
608-208	..... Nextel	Janesville		608-258	..... Ameritech landline	Madison	..... Main
608-209	..... Nextel	Madison		608-259	..... Ameritech landline	Madison	..... Main
608-210	..... Mid-Plains	Madison		608-260	..... Ameritech landline	Madison	..... Main
608-211	..... Reserved			608-261	..... Ameritech landline	Madison	..... Spring
608-212	..... U. S. Cellular (TDS)	Madison		608-262	..... Ameritech landline	Madison	..... Spring
608-213	..... Unassigned			608-263	..... Ameritech landline	Madison	..... Spring
608-214	..... U. S. Cellular (TDS)	Monroe		608-264	..... Ameritech landline	Madison	..... Spring
608-215	..... PCS Primeco	Madison		608-265	..... Ameritech landline	Madison	..... Spring
608-216	..... Unassigned			608-266	..... Ameritech landline	Madison	..... Spring
608-217	..... Unassigned			608-267	..... Ameritech landline	Madison	..... Spring
608-218	..... Ameritech landline	Madison	..... Sylvan	608-268	..... U.S.Xchange	Madison	
608-219	..... U. S. Cellular (TDS)	Madison		608-269	..... CenturyTel	Sparta	
608-220	..... U. S. Cellular (TDS)	Madison		608-270	..... Ameritech landline	Madison	..... Black Oak
608-221	..... Ameritech landline	Madison	..... Pflaum	608-271	..... Ameritech landline	Madison	..... Black Oak
608-222	..... Ameritech landline	Madison	..... Pflaum	608-272	..... CenturyTel	Catact	
608-223	..... Ameritech landline	Madison	..... Pflaum	608-273	..... Ameritech landline	Madison	..... Black Oak
608-224	..... Ameritech landline	Madison	..... Pflaum	608-274	..... Ameritech landline	Madison	..... Black Oak
608-225	..... U. S. Cellular (TDS)	Madison		608-275	..... Ameritech landline	Madison	..... Black Oak
608-226	..... Ameritech landline	Madison	..... Pflaum	608-276	..... Ameritech landline	Madison	..... Black Oak
608-227	..... KMC Telecom	Madison		608-277	..... Ameritech landline	Madison	..... Black Oak
608-228	..... U. S. Cellular (TDS)	Madison		608-278	..... Ameritech landline	Madison	..... Black Oak
608-229	..... KMC Telecom	Madison		608-279	..... U. S. Cellular (TDS)	Madison	
608-230	..... Mid-Plains	Madison		608-280	..... Ameritech landline	Madison	..... Main
608-231	..... Ameritech landline	Madison	..... Sylvan	608-281	..... Ameritech landline	Madison	..... Main
608-232	..... Ameritech landline	Madison	..... Sylvan	608-282	..... Ameritech landline	Madison	..... Main
608-233	..... Ameritech landline	Madison	..... Sylvan	608-283	..... Ameritech landline	Madison	..... Main
608-234	..... AT&T Local	Madison		608-284	..... Ameritech landline	Madison	..... Main
608-235	..... U. S. Cellular (TDS)	Madison		608-285	..... Ameritech landline	Madison	..... Main
608-236	..... Ameritech landline	Madison	..... Sylvan	608-286	..... Ameritech landline	Madison	..... Main
608-237	..... AT&T Local	Madison		608-287	..... Ameritech landline	Madison	..... Main
608-238	..... Ameritech landline	Madison	..... Sylvan	608-288	..... Ameritech landline	Madison	..... Black Oak
608-239	..... Sprint Spectrum	Madison		608-289	..... U. S. Cellular (TDS)	Janesville	
608-240	..... Ameritech landline	Madison	..... Kedzie	608-290	..... U. S. Cellular (TDS)	Janesville	
608-241	..... Ameritech landline	Madison	..... Kedzie	608-291	..... Unassigned		
608-242	..... Ameritech landline	Madison	..... Kedzie	608-292	..... Unassigned		
608-243	..... Ameritech landline	Madison	..... Kedzie	608-293	..... CenturyTel Wireless	Monroe	
608-244	..... Ameritech landline	Madison	..... Kedzie	608-294	..... Ameritech landline	Madison	..... Main
608-245	..... Ameritech landline	Madison	..... Kedzie	608-295	..... U. S. Cellular (TDS)	Janesville	
608-246	..... Ameritech landline	Madison	..... Kedzie	608-296	..... GTE of Wisconsin	Westfield	
608-247	..... U. S. Cellular (TDS)	Madison		608-297	..... GTE of Wisconsin	Montello	
608-248	..... Cochrane Cooperative	Cochrane		608-298	..... Ameritech landline	Madison	..... Black Oak
608-249	..... Ameritech landline	Madison	..... Kedzie	608-299	..... Unassigned		

Figure 1. The 608-2XX central office code assignments as of March 15, 2000. Source: North American Numbering Plan Administration website (http://www.nanpa.com/number_resource_info/co_code_assignments.html).

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TELECOM INDUSTRY NEWS (continued)

Village of Cochrane and the City of Buffalo, two small communities near the Mississippi River in Buffalo County. We'll encounter several more distant communities with 608-2XX numbers as we proceed.

25X, 28X

These two blocks bring us to Ameritech's Main exchange. It's called Main because it's on Main Street, but it's also "main" in two other senses: it serves downtown Madison, and it's the largest exchange in 608 based on the number of NXX codes.

In the 5-digit days, Main numbers were in the form 5-XXXX, 6-XXXX, and 7-XXXX; these blocks subsequently became 255-XXXX, 256-XXXX, and 257-XXXX. As more numbers were needed, the 25X block was filled, then the 28X block, and now it's using parts of the 26X and 29X blocks.

There are some notable curiosities about Main:

- Main includes most of the 25X block, but there are two exceptions: 253 and 254, which have been assigned to GTE in Wisconsin Dells since the early 60s.

- Main also includes most of the 28X block. Again, there are two exceptions, but in this case, they're recent assignments: 288 (Ameritech's Black Oak exchange) and 289 (U.S. Cellular in Janesville).

- One of those 28X codes is 281, Madison's "choke" exchange. Choke exchanges are special number blocks whose purpose is to restrict the number of simultaneous calls that can be made to one number. They were widely used during the 60s and 70s for radio station request lines so that call-in contests wouldn't overwhelm the phone system. Although modern switching systems can handle this problem in other ways, 608-281 numbers are still restricted to broadcast stations. There are no other businesses, and no residences, in this block.

- And finally, Main includes one 26X code: 260. That's a real oddity: it's not

part of the government Centrex system even though it falls in the 26X block. And that leads us to ...

26X

Ameritech's Spring Street exchange is the switch for the government Centrex system. It serves the city, the county, the state, the feds, the University, two hospitals, and any number of quasi-governmental commissions, agencies, and similar entities.

In the 5-digit days, Spring didn't exist. Government offices had separate numbers (mostly 25X), and individual PBXs.

Spring includes seven NXX codes, 261 through 267, grouped more or less as follows:

- 261, part of 264, 266, and 267: City of Madison, Dane County, State of Wisconsin, United States Government, and Meriter Hospital (but, curiously, not the VA Hospital).

- 262, 263, part of 264, and 265: UW-Madison, including University Extension, UW System Administration, UW Health (Hospitals and Clinics), and the residence halls.

But it doesn't include 268, 269, and 260. Why not? Because of the Centrex dialing plan:

- Intra-Centrex calls are dialed last-five-digits only. Thus, all numbers beginning with 1, 2, ... 7 are intra-Centrex five-digit numbers.

- Outside calls require dialing 8 (for long distance) or 9 (for local) first. This usage conflicts with 268 and 269.

- The local operator is reached by dialing 0; this usage conflicts with 260.

So these three codes have been assigned elsewhere:

- 608-268 is assigned to USXchange, a Competitive Local Exchange Carrier (CLEC) in Madison.

- 608-269 is assigned to CenturyTel, the local exchange carrier in Sparta.

- 608-260 is assigned to Ameritech, for landline service from its Main Street exchange.

27X

Ameritech's exchange on Black Oak Drive serves most of southwest Madison and the northern part of Fitchburg. We're all familiar with it as the home of the 27X block, but also includes two non-27X codes, 288 and 298.

Back in the 5-digit days, Black Oak didn't exist. By the time it was built ("way the hell out in the country" according to Chapter 24's Stan Scharch), the rest of Madison had already converted to 7-digit numbers, so Black Oak opened with 7-digit numbers on day one.

Black Oak uses eight 27X codes, and the other two are assigned to other companies. The entire 270-279 block is now completely assigned.

A curious oddity concerns the 608-275 block: there are very few businesses, and no residences, in this block. Reason: when this block was first opened, three large business entities consumed most of its numbers almost immediately:

- The paging company then known as Curtin Call moved its paging operations from downtown out to the west side, and all 252-XXXX pager numbers became 275-XXXX.

- Rayovac completed the construction of its new World Headquarters Building.

- Ameritech's Mobile division opened new paging facilities.

29X

This block is a real mishmash. Ameritech has two 29X codes as overflow from other number blocks: 294 at Main and 298 at Black Oak. GTE uses two others: 296 in Westfield and 297 in Montello. Three more are assigned to cellular companies, and

(continued on next page)

FCC HAS NEW BROADCAST DATABASE

By Tom Smith

The FCC has made available on the internet a new database for information on broadcast licenses and applications. This database is called the Consolidated Database System. A link to it can be found on the Mass Media Bureaus Home Page, which can be found on the FCC's Web Site. The search engine for this new database allows for much easier searching of information about broadcast stations, including TV and FM translators.

To use the old database, one had to know either the call letters of the station or its FCC file number. The new database can be searched by a number of means beside file numbers and call letters. Searches can be done by city and state, frequency, keywords and type of service, as well as call letters and file numbers. The new database gives not only the license data such as frequency, power, coordinates, antenna height for TV and FM, and ownership address information as in the past, but

also gives copies of some station documents such as licenses and applications. The ownership data has been expanded to give better information such as phone numbers. To get maps of station's locations, one still has to go to Elliott's Radiostation.com and use their search engine or the Kodis search engine, also on the same web site.

Not all of the information on all of the stations is complete due to the age of the information and the difficulty in transferring older data to computer. Along with the Universal Licensing System database for two-way and microwave radio, it should get easier to find data on FCC licenses. These database programs are long overdue and should have been undertaken years ago to better aid the FCC in managing the spectrum.

From Doug Lung's Transmitter.com web site (www.transmitter.com) and FCC Mass Media web site. (www.fcc.gov)

TELECOM INDUSTRY NEWS (conclusion)

three remain unassigned: 291, 292, and 299.

EXCHANGENAMES

Before leaving this topic, we should acknowledge that Madison once used, for a brief period during the mid-50s, numbers in the 2L+5D format:

- Pflaum was ACademy 2 before it became 222.
- Sylvan was CEdar 3 before it became 233.
- Kedzie was CHerry 4 before it became 244.
- Main was ALpine 5 before it

became 255.

The 26X, 27X, 28X, and 29X blocks were introduced after the conversion to 7-digit numbers, so they never had 2L+5D numbers. And, of course, the 20X and 21X blocks couldn't have been 2L+5D even if they had existed: the numerals 0 and 1 don't have corresponding letters on the telephone dial.

Thanks to David Devereaux-Weber (UW Division of Information Technology) and Stan Sarch (WISC-TV), for information used in this article.

WBA ENGINEERING WORKSHOP

The 2000 WBA Summer Engineering Workshop will be held in conjunction with the WBA Summer Convention in Eau Claire on June 14th. This years theme is "Keeping Up With Your Station's Future" and the program is now being finalized. There will be more details in next month's newsletter, so mark your calendar now and spend June 14th with your fellow broadcast engineers in beautiful Eau Claire, Wisconsin.

LOCAL LEGALS

Compiled by Tom Smith

PROPOSED

WGEZ (AM) Beloit, WI

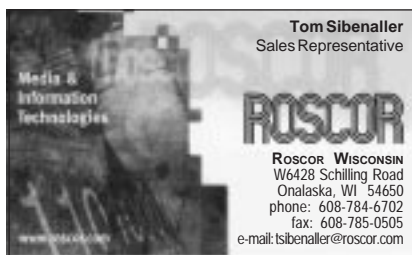
Great Radio Broadcasting, Inc. seeks FCC approval to sell WGEZ to Rago LTD (Ms. Betsy Trimble). WGEZ operates on 1490 kHz at 1 kilowatt. Released on March 24, 2000.

GRANTED

W54BH Madison, WI

Three Angels Broadcasting Network, Inc. has been granted a construction permit to build a low-power TV transmitter on channel 23 to replace their transmitter currently operating on channel 54. The new station will operate with 15 kilowatts of radiated power and its call letter will be W23BW. This is action is the result of a displacement application because of DTV allocations. Action was on March 24, 2000 and released on March 30, 2000.

From FCC Mass Media Daily Notices (www.fcc.gov)



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FCC Rulemakings

Compiled By Tom Smith

PROPOSED RULEMAKINGS

MM Docket No. 00-39

Review of the Commissions Rules and Policies Affecting the Conversion To Digital TV

The FCC is seeking comment on the progress and problems concerning the implementation of and conversion to digital television. In the Fifth Report and Order, the FCC stated that they would conduct a review every two years to ensure that the transition to DTV and the recovery of spectrum meets the public interest. The FCC stated in the opening summary that the transition is progressing and that broadcasters were working to meet the FCC deadlines. The Commission noted that 81% or 1376 stations had filed as of February 23rd, of which 97% or 1314 commercial stations had met the November 1, 1999 application deadline. Many of the remaining 3% had channel changes or other actions concerning their DTV channel before the Commission. The FCC has granted 316 construction permits and 119 stations are on the air.

The FCC is seeking comments on a number of issues pertaining to the transition, with a special focus on three issues. The first issue concerns replication of NTSC coverage and coverage over city of license. With some stations proposing to put low power transmitters on the air initially, the FCC is concerned about lack of service to existing rural coverage areas. They are proposing various deadlines for a station to operate at full power. The FCC is also concerned about coverage over the city of license. This concern arises due to requests from some stations on the fringes of large markets who wish to move their transmitters closer to the larger city. The FCC feels that some of these moves will cause loss of coverage to the city of licenses due to the distances of some of the proposed moves. Use of smaller transmitters compounds the problem. These moves also could become a De Facto move of stations to a larger market, resulting in loss of service to the smaller market.

The second major issue that the Commission raised was that of the election of channels at the end of the DTV transition. At the end of the transition, licensees must choose if their DTV operation will remain on the channel they were allotted for DTV, or if they wish to move the DTV operation to their NTSC channel. Most stations operating NTSC stations in the VHF band have DTV stations in the UHF band. They may want to move the DTV operation to the VHF band due to lower operating cost. The FCC would like to know their plans before the end of the DTV transition, to aid in planning the moving of stations from non-core channels (52-69) into the core channels of 2-51. The creation of the low power Class "A" stations adds to the planning needs.

The third major issue is how to resolve mutually exclusive applications. These are applications that would be in conflict with each other, such as two adjoining co-channel stations requesting power increases that would result in signal overlap. The FCC is proposing the use of a number of methods. The first is a cut-off method which would give a limited time for competing stations to file. The second is a priority method that would require the applicant to meet certain requirements in relation to existing stations. And the third method is an auction between applicants.

The FCC is also asking for comments on tower siting issues, copyright protection, cable and TV tuner standards, and VSB. The FCC is not interested in comments on must-carry and the proposed end date of the transition of December 31, 2006. These will be covered in other notices.

Comments are due on May 17, 2000, and replies on June 16, 2000. This notice was adopted on March 6th and released on March 8, 2000. It was published in the FEDERAL REGISTER on March 23, 2000.

Report No. AUC-00-33-A (Auction 33); DA 00-559

Auction of licenses for the 700 MHz Guard Bands Scheduled for June 14, 2000; Comment Sought on Reserve

Prices or Minimum Opening Bids and Other Auction Procedural Issues

The FCC is seeking comment on the auction of six Megahertz of spectrum in the UHF-TV band from Channel 60-69. This spectrum consists of the frequencies of two paired bands. One band consists of a pair of one megahertz bands from 746-747 and 776- 777 MHz and one pair of 2 megahertz bands from 762-764 and 792-794 MHz. There will be one license for each band in 52 Major Economic Areas for a total of 104 licenses.

The notice is what has become the normal discussion in the creation of an FCC auction. This notice was published in the FEDERAL REGISTER on March 17, 2000 on pages 14,561-14,565. Comments were due on March 22nd and replies were due on March 29th.

ET Docket No. 00-47; FCC 00-105 Inquiry Regarding Software Defined Radios

The FCC has started an inquiry in the use of software defined radios. These are radios that could change frequency bands, modulation standards and power output by software control. Most of this inquiry is a listing of things that must be considered by a manufacturer when designing a radio. Most of what was discussed can and is being done with known technology. The main issue that would require FCC action with these radios would be operation after installing new software on a frequency or in a mode that was not tested when the unit was originally approved for use.

The FCC seems to be interested in promoting technology that would allow them or the marketplace to reallocate spectrum without requiring the consumer to make a lengthy transition to new equipment.

Comments are due on June 14, 2000 with replies due on July 14, 2000. The notice of inquiry was adopted on March 17th and released on March 22nd with publication in the FEDERAL REGISTER on March 31, 2000 on pages 17,246-17,248.

FINAL RULEMAKINGS

(continued on next page)

DA 00-262

Auction of licenses in the 747-762 and 777-792 Bands Scheduled for May 10, 2000; Report No. AUC-0031-C (Auction no. 31)

The FCC has issues the rules concerning the conduct of the auction of 30 MHz from the TV UHF band where Channels 60-69 are located. This auction is scheduled to start on May 10th.

This notice was published in the FEDERAL REGISTER on March 8, 2000 on pages 12,251-12,265. The notice was released on February 18, 2000.

**CS Docket No. 99-363
Implementation of the Satellite Home Viewer Improvement Act of 1999
Retransmission Consent Issues:
Good Faith Negotiation and Exclusivity**

The FCC has issued rules that adopt a two-part test for good faith negotiations with multi-video program providers, particularly satellite program providers.

The first test consists of a "brief, objective list of negotiation standards." There are six points to the list. They are as follows: A broadcaster may not refuse to negotiate with a multi-video program provider. A broadcaster must appoint a representative with authority to bargain on retransmission consent issues. A broadcaster must agree to meet at reasonable times and cannot delay the negotiations. A broadcaster may not put forth a single unilateral proposal. In response to a multi-video program providers offer, a broadcaster must provide considered reasons for rejecting any part of the offer. And finally, a broadcaster cannot enter into any agreement that prohibits retransmission consent to another multi-video program provider.

The second part of the good faith test is that the multi-video program provider

who wishes to claim the negotiations lack good faith may present facts to the FCC other than those described in the first test.

The notice has a list of behaviors that the FCC considers violations of good faith as part of the discussion of its action. The FCC also lists subjects that are within the rights of broadcasts to ask of the multi-video provider.

The Report and Order is 53 pages long and should be required reading by station management, including engineering management. One of the violations of good faith deals with not providing a multi-video program provider with a direct signal from the station.

This notice was adopted on March 14, 2000 and released on March 16, 2000.

From the FEDERAL REGISTER (www.access.gpo.gov) and FCC Notices (www.fcc.gov)

Employment Opportunity

WKBT-TV in LaCrosse has an immediate opening for a Television Maintenance Engineer. Duties include installing and maintaining television broadcast equipment. Experience in Radio or TV Broadcast Engineering and SBE certification is a plus.

Training will be provided. Send your resume to:

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SBE Chapter 24 Newsletter
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FIRST CLASS MAIL

Newsletter edited on Pagemaker 5.0 by: Mike Norton
 Contributors this month: Lloyd Berg, Leonard Charles, Neil McLain, Tom Smith, and Tom Weeden.
 Thanks to Leonard Charles for his work on the Chapter 24 WWW page.

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APRIL MEETING and PROGRAM



**Society of Broadcast Engineers
CHAPTER 24 MADISON, WISCONSIN
Wednesday, April 26, 2000**

ELECTIONS AND DANE COUNTY EMERGENCY ALERT SYSTEM

This month we will hold Chapter 24 Officer elections. Following elections we will re-visit our Dane County Emergency Alert System with Dave Janda. Dave is Jim Engeseth's successor at Dane County Emergency Management. Dave will tell us what has been done at the County's Emergency Management Offices and 911 Operations Center to prepare them to be an originator in the local EAS. We will tell Dave what we have done to prepare to monitor his broadcasts with our EAS decoders. This is in preparation for full deployment of the system once the FCC approves new non-weather codes for use with EAS.

**Dutch Treat Dinner
at 5:30 PM**

Meeting and Program at 7:00 PM

**at J.T. Whitney's
674 S. Whitney Way**

Visitors and guests are welcome at all of our SBE meetings!

2000 UPCOMING MEETING/PROGRAM DATES:

Day	Date	Program
Thursday	May 25	Shortwave Radio

Program Committee:	Kerry Maki 833-0047	Denise Maney 277-8001	Steve Zimmerman 274-1234	Mark Croom 271-1025	Steve Paugh 277-5139
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